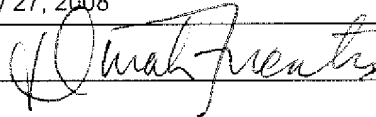
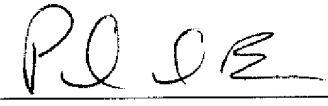


Doc Code: AP.PRE.REQ

PTO/SB/33 (07-05)

Approved for use through 05/31/2008. OMB 0651-0031  
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

<b>PRE-APPEAL BRIEF REQUEST FOR REVIEW</b>		Docket Number (Optional)  739-X01-005							
<p>I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to "Mail Stop AF, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450" [37 CFR 1.8(a)]</p> <p>on <u>May 27, 2008</u></p> <p>Signature <u></u></p> <p>Typed or printed name <u>Dinah Fuentes</u></p>		<table border="1" style="width: 100%; border-collapse: collapse;"><tr><td style="width: 50%; padding: 5px;">Application Number  09/870,387</td><td style="width: 50%; padding: 5px;">Filed  May 29, 2001</td></tr><tr><td colspan="2" style="padding: 5px;">First Named Inventor  Carl J. G. Evertsz</td></tr><tr><td style="padding: 5px;">Art Unit  3692</td><td style="padding: 5px;">Examiner  N. SUBRAMANIAN</td></tr></table>		Application Number  09/870,387	Filed  May 29, 2001	First Named Inventor  Carl J. G. Evertsz		Art Unit  3692	Examiner  N. SUBRAMANIAN
Application Number  09/870,387	Filed  May 29, 2001								
First Named Inventor  Carl J. G. Evertsz									
Art Unit  3692	Examiner  N. SUBRAMANIAN								
<p>Applicant requests review of the final rejection in the above-identified application. No amendments are being filed with this request.</p> <p>This request is being filed with a notice of appeal.</p> <p>The review is requested for the reason(s) stated on the attached sheet(s). Note: No more than five (5) pages may be provided.</p> <div style="display: flex; justify-content: space-between; align-items: flex-start; margin-top: 20px;"><div style="width: 45%;"><p>I am the</p><p><input type="checkbox"/> applicant/inventor.</p><p><input type="checkbox"/> assignee of record of the entire interest. See 37 CFR 3.71. Statement under 37 CFR 3.73(b) is enclosed. (Form PTO/SB/96)</p><p><input checked="" type="checkbox"/> attorney or agent of record.      43,500 Registration number _____</p><p><input type="checkbox"/> attorney or agent acting under 37 CFR 1.34. Registration number if acting under 37 CFR 1.34 _____</p></div><div style="width: 50%; text-align: center;"> _____ Signature Paul D. Bianco _____ Typed or printed name  305 830-2600 _____ Telephone number  May 27, 2008 _____ Date</div></div> <p>NOTE: Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required. Submit multiple forms if more than one signature is required, see below*.</p>									
<p><input type="checkbox"/> *Total of _____ forms are submitted.</p>									

This collection of information is required by 35 U.S.C. 132. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11, 1.14 and 41.6. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Mail Stop AF, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant(s): Carl J. G. Evertsz et al.

Confirmation No.: 7493

Application No.: 09/870,387

Attorney Docket No: 739-X01-005

Filed: May 29, 2001

Group Art Unit: 3692

For: METHOD AND COMPUTER SYSTEM FOR  
COMPUTING AND DISPLAYING A PHASE  
SPACE

Examiner: N. Subramanian

**PRE-APPEAL BRIEF REQUEST FOR REVIEW**

The following remarks are submitted to be considered along with the Appellant's notice of appeal. The references cited by the Examiner do not anticipate, teach, nor suggest the presently claimed invention.

**THE OFFICIAL NOTICE TAKEN BY THE EXAMINER IS EVIDENCE OF CLEAR  
ERROR**

The Appellants respectfully suggest that the Examiner's continual reliance on official notice without an affidavit allowed under MPEP §707 more constitutes clear error. With respect to claims 1, 23, and 25 the Examiner states:

Stewart does not explicitly teach the formulas used in the calculating step and the steps of determining and storing with the electronic processor a first and a second coordinate value of a point in phase space based on the volatility and the net change; and providing as an output of the electronic processor a display of the point in phase space.

Official notice is taken that these steps are old and well known in the financial art. The formulas recited in the claims are old and well known formulas for computing the variance and mean values of a sequence in continuous time. For instance computing the expected return and variance of a security and plotting in the mean-variance space has been in vogue at least for the last three decades. This plot helps in the selection of securities according one's risk-return preferences.

With respect to claim 28 the Examiner states:

Stewart does not explicitly teach the formulas used in the calculating step and the steps of (iv) determining a first and a second coordinate value of a point in phase space based on the volatility and the return; and (v) displaying the point in phase space using a medium selected from the group

consisting of: computer display, printed media; and (c) for a plurality of said plurality of sequences of step (b): (i) calculating a probability distribution of the calculated return values; (ii) providing a probability threshold value; and (iii) defining a sub-space of the phase space based on the probability distribution and the probability threshold value; and (iv) enabling the visualization of the sub-space on the medium selected.

Official notice is taken that these steps are old and well known in the financial art. The formulas recited in the claims are old and well known formulas for computing the variance and mean values of a sequence in continuous time. For instance computing the expected return and variance of a security and plotting in the mean-variance space has been in vogue at least for the last three decades. This plot helps in the selection of securities according one's risk-return preferences. Computing a probability distribution of the calculated return values using the expected return and variance/standard deviation and plotting them is old and well known in the art of Finance and Statistics. This plot enables one understand the variability of the returns and helps in making informed decisions.

As can be seen, the Examiner admits that Stewart does not teach elements of the presently claimed invention, but relies upon unsupported Official Notice to reject the claims. Appellants have repeated requested that the Examiner provide patents and/or publications or file an affidavit as is allowed under MPEP §707 to support the Examiner's user of Official Notice. However, the Examiner has failed to do so.

MPEP §2144.03 states "If the applicant traverses such an assertion the examiner should cite a reference in support of his or her position." If, however, the Examiner's statements are based on facts within the personal knowledge of the Examiner, the Applicants respectfully request that the Examiner support these references by filing an affidavit as is allowed under MPEP §707, citing 37 CFR 1.104(d)(2), and as specified in MPEP §2144.03. See, MPEP §2144.03, "When a rejection is based on facts within the personal knowledge of the examiner, the data should be stated as specifically as possible, and the facts must be supported, when called for by the applicant, by an affidavit from the examiner."

The Examiner has not cited a reference nor has the Examiner filed an affidavit as is allowed under MPEP §707 in support of the Official Notice. Therefore, the Examiner's use of Official Notice to reject claim elements not taught by Stewart is clear error and the independent claims should have been allowed in view of Stewart.

**THE REJECTION OF CLAIMS 1-7, 10-13, 16, 19, and 23-28 UNDER 35 U.S.C. 101 IS IMPROPER**

The Examiner rejected claims 1-7, 10-13, 16, 19 and 23-28 under 35 U.S.C. 101 because the claims do not require any physical transformation and the invention as claimed does not produce a useful, concrete, and tangible result. However, Appellants respectfully disagree.

The independent claims (a) provide a sequence of data samples corresponding to the real world data measured in relation to a dimension; (b) calculate and store a single volatility of the sequence; (c) scale and store the volatility with a factor, the factor being dependent on the length of the sequence; (d) calculate and store a net change in the data as a difference between data samples within the sequence; (e) determine and store a first and a second coordinate value of a point in phase space based on the volatility and the net change; and (f) provide as an output of a display of the point in phase space.

As can be seen, the independent claims display the point in the phase space. Displaying an item clearly produces a useful, concrete, and tangible result. The Examiner states:

It is not clear as to what is the utility of computing and displaying a point in space. The utility of the claimed invention is not specific, substantial and credible. It is not clear as to what is the specific, substantial and credible utility of "providing as an output of the electronic processor a display of the point(s) in phase space" or "enabling displaying of the sub-space on the medium selected".

A careful reading of the claim reveals that the point reveals volatility and net change information, i.e., the point includes a first and second coordinate based on the volatility and net change. As discussed in the previous response dated December 26, 2007, displaying a point in the phase space enables valuation of the volatility versus the development of the observed variable over a specific period. In the case of financial data this enables relating the return to the volatility, such as for the comparison of the characteristics and performance of financial and stock market values. The "point" as recited for the presently claimed invention allows a user to see the relation of the return and the volatility. Therefore, the presently claimed invention produces a useful, concrete, and tangible result and the Examiner's rejection under 35 U.S.C. 101 is improper and should be withdrawn.

**THE REJECTION OF CLAIMS 1-7, 10-13, 16, 19 and 23-27 UNDER 35 U.S.C. 112, SECOND PARAGRAPH, IS IMPROPER**

The Examiner rejected claims 1-7, 10-13, 16, 19, and 23-27 under 35 U.S.C. 112, second paragraph stating:

Independent claims recites the limitation "determining and storing with the electronic processor a first and a second coordinate value of a point in phase space based on the volatility and the net change". However it is not clear if the first coordinate value is based on volatility or scaled volatility. If it is based on unscaled volatility, it is not clear what is the purpose of scaling the volatility.

However, a careful reading of the independent claims clearly shows that the volatility recited in step (e) of the independent claims is the scaled volatility. The independent

claims enumerate steps (a) to (f), which show a specific order. Therefore, because step (c) scales the volatility and step (e) comes after step (c), the volatility in step (e) is clearly the scaled volatility factor. Accordingly, the rejection under 35 U.S.C. 112, second paragraph is improper and should be withdrawn.

### **CLAIMS 1-7, 10-13, 16, 19, AND 23-28 ARE PATENTABLE OVER THE CITED ART**

The presently claimed invention can be applied for the analysis and visualization of data samples from the fields of sociology, such as data from opinion polls, or even for comparison of the relative performance of football-teams. (§[0051]). Furthermore, the presently claimed invention is not restricted to data samples covering a specific period of time. Especially for data samples obtained from the fields of physical experiments and technology, the series of the data samples can also span other dimensions like length, energy, or speed. (§[0052]).

The presently claimed invention is advantageous in that it enables valuation of the volatility versus the development of the observed variable over a specific period. (§[0007]). In the case of financial data this enables relating the return to the volatility, such as for the comparison of the characteristics and performance of financial and stock market values. (Id). According to a preferred embodiment the relation of the return and the volatility is displayed in a phase space. (§[0008]).

Further the presently claimed invention enables computation of a curve in the phase space. The points of the curve are calculated based on consecutive sub-sequences of the sequence of data samples. In the case of stock market data, a logarithmic grid is preferably used for determining the sub-sequences. (§[0010]). This is of particular advantage for stock market data. For many stock values the volatility scales as the square root of time. (§[0011]). This is compensated for by the logarithmic grid. (Id).

FIG. 3 of the presently claimed invention shows an example of a display of the phase space with a corresponding sub-space. The phase space is defined by a coordinate system. The x-axis of the coordinate system is the scaled volatility and the y-axis is the return R. (§[0073]). This way the relative performance and the differences in the quality of the stocks being considered become apparent. (§[0075]).

An additional curve 3a delimits a further sub-space corresponding to a choice of a probability threshold... (§[0078]). In essence the display shown in accordance with FIG. 3 enables intuitively comparing the relative performances and quality of a portfolio of stocks over an arbitrarily chosen time frame. (§[0082]).

Thus the presently claimed invention enables an intuitive comparison of both volatility and return, for a variety of possible parameters, measured against a variety of possible dimensional values, where the result is adjusted so that the displaying is effective for different time periods.

The calculations for volatility and return are different, and generate a more meaningful result than the prior art, especially Stewart. Further, the form of display intuitively conveys more information than in the prior art.

As stated above, the Examiner has admitted that Stewart does not teach various aspects of the presently claimed invention. Furthermore, Stewart merely teaches that the program computes the relative changes or standardized returns from the time series data  $X(t_i)$ :  $x(t_i) = [X(t_i) - X(t_{i-1})] / X(t_{i-1})$ . (Col. 6, lns. 56-58), where  $x(t_i)$  is referred to as the fluctuations. (Id). Nowhere is a logarithmic operation, as recited for the presently claimed invention, performed by Stewart's  $X(t_i)$ :  $x(t_i) = [X(t_i) - X(t_{i-1})] / X(t_{i-1})$ . The Examiner has not shown how Stewart teaches or suggests this aspect of the presently claimed invention and has also failed to support any Official Notice taken by the Examiner.

Even further, the Examiner has ignored the language of “wherein the first coordinate value corresponds to an x-axis value of a Cartesian coordinate system, the x-axis being representative of the volatility and wherein the second coordinate value corresponds to a y-axis value, the y-axis being representative of the net change, and wherein the point is displayed on the on the Cartesian coordinate system according to the first coordinate value and the second coordinate value” added to dependent claim 10 and similar language added to independent claim 28. The Examiner has not shown how Stewart teaches or suggests these claim elements.

Accordingly, in view of the remarks and arguments given above, Stewart fails to teach or suggest the presently claimed invention. Accordingly, claims 1-7, 10-13, 16, 19, and 23-28 recite in allowable form and the Examiner's rejection under 35 U.S.C. § 103(a) has been overcome and should be withdrawn.

The Appellants hereby respectfully request reconsideration and allowance of pending claims 1-7, 10-13, 16, 19, and 23-28 of the instant application.

PLEASE CALL the undersigned if that would expedite the prosecution of this application.

Respectfully Submitted,

Date: May 27, 2008

By: /Paul Bianco /

Paul Bianco, Reg. #43,500

Attorney for the Applicants

Customer Number: 27317  
Fleit Gibbons Gutman Bongini & Bianco P.L.  
21355 East Dixie Highway, Suite 115  
Miami, Florida 33180  
Tel: 305-830-2600; Fax: 305-830-2605